

Notice of Allowability

Application No.

09/852,029

Examiner

Ling-Siu Choi

Applicant(s)

KOJIMA ET AL.

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Amendment filed 01/05/2005.
2. ☒ The allowed claim(s) is/are 16-43.
3. ☒ The drawings filed on 10 May 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

1. This Office Action is in response to the Amendment filed January 5, 2005. Claims 1-15 were canceled and claims 16-43 are now pending.

Allowable Subject Matter

2. Claims 16-43 are allowed.
3. The following is an examiner's statement of reasons for allowance:

The present claims are allowable over the closest references: Mathies et al. (US 5,274,240) and Karger et al. (US 5,085,757).

A capillary array electrophoresis apparatus comprising
a thermostatic oven which is permitted temperature adjustment and in which space is adapted to accommodate selectively one of a plurality of capillary arrays of different length ;
a plurality of capillaries of a selected one of the plurality of capillary arrays of different length, wherein the plurality of capillaries are disposed in a predetermined position in the space of the thermostatic oven so that <u>the plurality of the capillaries neither tangle each other nor concentrate in a bundle shape</u> ;
an excitation light system which irradiates excitation light to the capillaries;
a light receiving optical system which detects fluorescence;
a power source which applies a voltage between the ends of the capillaries

(summary of claim 16)

A capillary array electrophoresis apparatus comprising
a thermostatic oven which is permitted temperature adjustment and in which space is adapted to accommodate selectively one of a plurality of capillary arrays of different length ;
a plurality of capillaries of a selected one of the plurality of capillary arrays of different length, wherein the plurality of capillaries are disposed in a predetermined position in the space of the thermostatic oven <u>while being bent in one of a plurality of directions depending on the length thereof</u> ;
an excitation light system which irradiates excitation light to the capillaries;
a light receiving optical system which detects fluorescence;
a power source which applies a voltage between the ends of the capillaries

(summary of claim 23)

Mathies et al. disclose a laser-excited capillary array comprising a plurality of side-by-side capillary passages disposed in a plane of a detection area, a source of radiant energy, an objective lens for receiving and focusing the radiant energy at an excitation volume **in the plane of the plurality of side-by-side capillary passages**, means for moving the plurality of side-by-side capillary passages, a detection system, and computer means for receiving and processing the signal from the plurality of side-by-side capillary passages, wherein the plurality of capillaries may be separated for individual manipulation and loading and the detection window is prepared by burning off the polyimide coating of the capillary in the detection area (col. 5, lines 15-25; col. 6, lines 9-14; claim 1; Fig. 1). However, Mathies et al. do not teach or fairly suggest a capillary array electrophoresis apparatus comprising a thermostatic oven in which **space** is adapted to accommodate selectively one of a plurality of capillary arrays of **different length** such that the plurality of the capillaries neither tangle each other nor concentrate in a bundle shape or the plurality of the capillaries is bent in one of a plurality of directions

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depending on the length thereof.

Karger et al. disclose an integrated temperature control / alignment system for high performance capillary electrophoretic apparatus, the system comprising (a) means for thermoelectrically regulating heat transfer between the capillary column and the ambient environment to maintain the capillary column at a predetermined electrophoretic operating temperature, (b) means for mounting the capillary column in a predetermined position as part of the capillary electrophoretic apparatus, which is formed from an electrically insulative, high thermally conductive material, and is configured to envelope the working length of the capillary column, and (c) means for monitoring the predetermined electrophoretic operating temperature of the capillary column, which is disposed in direct thermal contact with the capillary column and is electronically interfaced with the thermoelectric controller to provide temperature signals to the means for thermoelectric regulating heat transfer (claims 1-2 and 11). However, Karger et al. do not teach or fairly suggest a capillary array electrophoresis apparatus comprising a thermostatic oven in which **space** is adapted to accommodate selectively one of a plurality of capillary arrays of **different length** such that the plurality of the capillaries neither tangle each other nor concentrate in a bundle shape or the plurality of the capillaries is bent in one of a plurality of directions depending on the length thereof.

In light of the above discussion, it is evident as to why the present claims are patentable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for

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Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098.

If attempt to reach the examiner by telephone are unsuccessful, the examiner=s supervisor, David Wu, can be reach on 571-272-1114.

L. S. Choi

LING-SUI CHOI
PRIMARY EXAMINER

April 15, 2005